

International Journal of
Science and Engineering Investigations

Volume 1, Number 1, 2013





Today: 16 May 2020

» Volume 9, Issue 99, May edition has been published. Authors are requested to take a look.

Home

Instructions for Authors

Topics

Call for Papers

Important Dates

Archive

Editorial Board

Publication Indexing

Papers Template

Copyright Form

Registration Form

Submit Manuscript

Best Paper Award

Authors Directory

Free Profile & Resume

Join Us

Contact Us



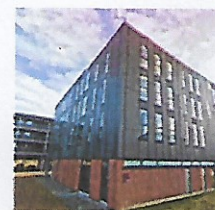
2 Years Impact Factor: 1.13

5 Years Impact Factor: 1.21

March 2020

About I.J.S.E.I

The "International Journal of Science and Engineering Investigations (IJSEI)" is an open access blind peer-reviewed international online journal. We publish high quality and refereed papers monthly. Papers reporting original research or extended versions of already published conference/journal papers are all welcome. Papers for publication are selected through peer review to ensure originality, relevance, and readability. The aim of IJSEI is to publish peer reviewed research and review articles fast without delay in the developing field of science and engineering. IJSEI hopes that Researchers, Research scholars, Academician, Industrialists, Consultancy etc. would make use of this journal publication for the development of science and engineering.



Latest News



Thanks to authors, peer reviewers and all contributors now we step into the 100th issue. In current issue you can make your scientific publications more visible and hopefully be more frequently cited, used and having impact, thus increasing your own reputation and chances of success in your academic work.

- Paper Submission Deadline for vol. 9, issue 100: May 22, 2020. [more»](#)
- Volume 9, Issue 99, April edition has been published. Authors are requested to take a look. [more»](#)
- IJSEI has a scientific collaboration with Oil and Gas Technologies and Analytics Magazine. Papers in relation will be translated and published in Russian with same license as IJSEI. [more»](#)
- Acceptable style of manuscript titles in IJSEI is Chicago-Style. Authors are requested to comply with the guidelines. [more»](#)
- Last IndexCopernicus Value for International Journal of Science and Engineering Investigations is 81.05 [more»](#)

Journal Metrics

Usage Factor:

Number of article downloads: 21891

Impacts:

h index: 16

i-10 index: 31

Citations: 1275

Availability:

Years: 2012/2020

Online ISSN: 2251-8843

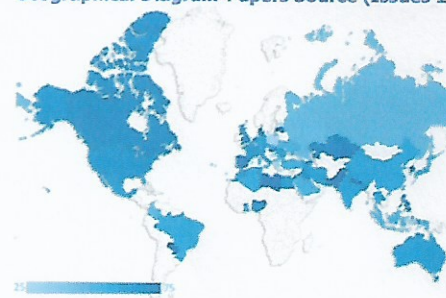
Accessibility: Open Access

Speed Factor:

Max. days from submission to first decision: 10

Max. days from acceptance to online publication: 7

Geographical Diagram-Papers Source (Issues 1-

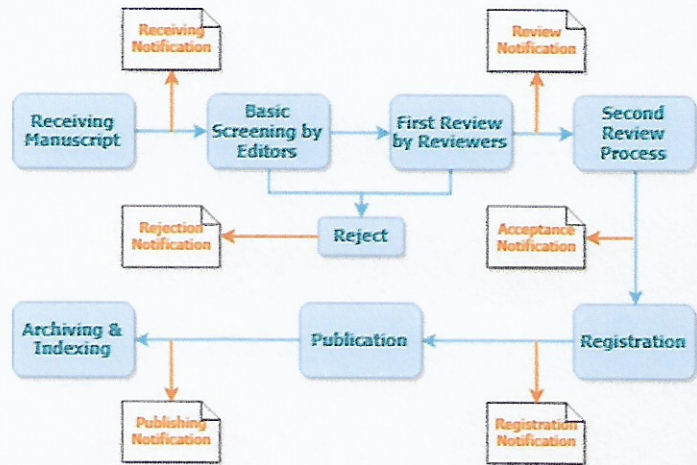


Blind Peer-review

A critical objective of International Journal of Science and Engineering Investigations (IJSEI)'s mission statement is to provide highly relevant technical information. IJSEI have implemented a rigorous blind peer review process to ensure the quality and relevance of the published research.

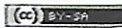
the high quality of its technical material. Peer review (also known as refereeing) is the process of subjecting ar
scholarly work, research, or ideas to the scrutiny of others who are experts in the same field. [more»](#)

Procedures



Disclaimer

Prospective authors should note that only original and previously unpublished manuscripts will be co
Furthermore, simultaneous submissions (under consideration for publication elsewhere) are not acceptable. Su
of a manuscript is interpreted as a statement of certification that no part of the manuscript is copyrighted by
publication nor is under review by any other formal publication. It is the primary responsibility of the author
proper permission for the use of any copyrighted materials in the manuscript, prior to the submission of the m
to IJSEI.



Contents are licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

[Privacy Policy](#) | [Terms of Use](#)



Today: 16 May 2020

» We welcome original or extended version of previously published papers in conferences and/or journals.

[Home](#)[Instructions for Authors](#)[Topics](#)[Call for Papers](#)[Important Dates](#)[Archive](#)[Editorial Board](#)[Publication Indexing](#)[Papers Template](#)[Copyright Form](#)[Registration Form](#)[Submit Manuscript](#)[Best Paper Award](#)[Authors Directory](#)[Free Profile & Resume](#)[Join Us](#)[Contact Us](#)

2 Years Impact Factor: 1.13

5 Years Impact Factor: 1.21

March 2020

Academic Board Members

Payam Rezaie.M
Editor-In-Chief

Antonio Nicell
Associate Editor

Adrien Lefavre
Managing Editor

Agafya Demidov
Coordinator
Philosophy of Science

Thiago Borges
Coordinator
Software Engineer

T. Hall
Webmaster
Software Engineer

Serge Meckaelovech Vereshaka
Mechanical Engineering
Sumy State University of Ukrain

S. Jani
Mechanical Engineering
Golpayegan University of Technology

Flavio de São Pedro Filho
Business Management
Universidade Federal de Rondônia

Chun-Yao Lee
Electrical Engineering
Chung Yuan Christian University

Mehdi Pourgholi
Control Engineering
Power & Water University of Technology

Wen-Jong Chen
Control Engineering
National Changhua University of Education

Habibolla Latifzadeh
Applied Mathematics
West Virginia University

Hidehiko Okada
Computer Science
Kyoto Sangyo University

Zhengsheng Wang
Computational Mathematics
Nanjing Univ. of Aeronautics & Astronautics

Filiz Ertem Kaya
Geometry, Differential Geometry
Omer Halisdemir University

Martin Schluter
Business Management
Titu Maiorescu University

Mahdi Nouri
Civil Engineering
IAU, Shabestar Branch

Mikhail P. Strongin
Thermo Physics
Xylem RCW

J. B. Helonde
Electrical Engineering
ITMCOE

B. Nilforooshan Dardashti
Nuclear Engineering
IAU, Boein Zahra Branch

Hai Tao
Computer Engineering
University Malaysia Pahang

Domenico Panno
Applied Physics
University of Palermo

E. Jamal Al-Hashemi
Management & Marketing
University of Bahrain

Elham Amini Boroujeni
Electrical Engineering
Tarbiat Modares University

Chuanxu Wang
Computer Vision
Qingdao University of Science & Technology

P. G. Burade
Electrical Engineering
Nuva College of Engineering & Technology

V. Sridhar
Reviewer
Information Technology

N. K. Tiwari
Information Technology
Shri Ramswaroop Memorial University

Amir Samimi
Reviewer
Chemical Engineering

A. Wadhawan
Reviewer
Mechanical Engineering

Feng Xiao
Civil Engineering
Chongqing Jiaotong University

N. Mehta
Reviewer
Electrical Engineering

Elayarajah Aruchunan
Computational Mathematics
Curtin University

Chenchen Dong
Reviewer
Information Technology

Jan Jezierski
Materials Engineering
Silesian University of Technology

André Luis Brasil Cavalcante
Civil and Geotechnical Engineering
University of Brasília

Elboukhari Mohamed
Computer Science
University Mohamed First

M. Sahraeyan
Reviewer
Geology and Geochemistry

Haider M. AlSabbagh
Electrical Engineering
Basra University

R. Murali
Mathematics
Dr. Ambedkar Institute of Technology

Adam Niewiadomski
Social and Human Sciences
University of Warsaw

Naagesh S. Bhat

W. Wei

A. rahdar

Reviewer VLSI	Computer Science Xi'an University of Technology	Reviewer Nano-Technology
Ahmed Kadhim Hussein Mechanical Engineering University of Babylon	Habtamu Mellie Epidemiology Debre Markos University	Loc Nguyen Philosophy in Mathematics and Statistics Sunflower Soft
Luciano Nascimento Materials Science University Center of João Pessoa	Mohammad Hasan Hashemi Reviewer IAU, Science and Research Branch	Rameshprabu Ramaraj Renewable Energy Majeo University
Milena Marinic Reviewer University Psychiatric Hospital Ljubljana	Arezu Jahanshir Physics Buein Zahra Technical University	Juel Chowdhury Doctor of medicine Oncomarks
Kakuro Amasaka Mechanical and System Engineering Hiroshima University	Nevin Çankaya Chemistry Uşak University	Malek Maaza Neutron Sciences Sorbonne Universités (Paris VI)



Contents are licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.
[Privacy Policy](#) | [Terms of Use](#)

[Home](#)[Instructions for Authors](#)[Topics](#)[Call for Papers](#)[Important Dates](#)[Archive](#)[Editorial Board](#)[Publication Indexing](#)[Papers Template](#)[Copyright Form](#)[Registration Form](#)[Submit Manuscript](#)[Best Paper Award](#)[Authors Directory](#)[Free Profile & Resume](#)[Join Us](#)[Contact Us](#)

2 Years Impact Factor: 1.13
5 Years Impact Factor: 1.21

ISSN 2090-4029

[Archive](#) » Volume 7, Issue 81, October 2018[OPEN ACCESS](#)[Received Pa](#)
[Accepted Pa](#)
[Acceptance R](#)

Paper ID	Paper Title	Author(s)	Pages	Dow
78118-01	Seismic Performance Evaluation of Knee and EBF Braced Frames Using Nonlinear Static Analysis	Incomplete Registration Waiting for approval ...	1-7	
78118-02	Reduction of Co-channel Interference in Cellular Network Using Sectorization Method	Incomplete Registration Waiting for approval ...	8-17	
78118-03	Gravitation – Flat Power Field	Incomplete Registration Waiting for approval ...	18-23	
78118-04	Calculation of Real Time Load Losses of Distribution Transformers Connected to a Feeder	Narasimha Pandit R. L. Chakrasali	24-27	
78118-05	Solving Triangle Routing Problem in Mobile IP	Incomplete Registration Waiting for approval ...	28-33	
78118-06	Cracks Growth Behavior through Wall Pipes under Impact Loading and Hot Environment	Incomplete Registration Waiting for approval ...	34-43	
78118-07	Effect of Greenery on the Perceived of Value and Customer Loyalty	Noneng R. Sukatmadiredja Emmywati Yayah Abmajawati	44-49	
78118-08	Contribution of Financial Mathematics and Linear Programming Courses and Gender to Financial Literacy	I Gusti Putu Suhartar I Made Suarjana Gst. Ayu Mahayukti I Putu Wisna Ariawan	50-53	
78118-09	Interdisciplinary Contextualization and Inquiry-Based Learning: How Engaging Can It Be?	Lee G. Baraquia	54-58	
78118-10	Evaluation of the Influence of the Fine Aggregate of Rigid Polyurethane Residue on Mortars	Isabela Amaral Martuchele Renata Leal Henriques Juliano de Freitas Dutra Beatriz de Abreu Guedes Carlos A. de Souza Oliveira	59-63	
78118-11	Observation and Measurement of Solar Activity for Study of Climate Trends	Bakhram Nurtaev	64-68	
78118-12	Describing the Research Programs of the Selected Sectarian Colleges in Region IX: Case Analysis	Gilbert A. Celesio	69-74	
78118-13	Best Practice of Reverse Logistics System for Plastic Waste Management: A Cross-Country Comparison	Pertiwi Andarani Kiky S. M. Puspanidiah Wiwik Budiawan Arya Rezagama Budi P. Samadikun	75-80	

Effect of Greenery on the Perceived of Value and Customer Loyalty

Noneng R. Sukatmadiredja¹, Emmywati², Yayah Atmajawati³

^{1,2}Mahardhika School of Business Surabaya East Java, Indonesia

³Indonesia School of Economic Surabaya, Indonesia

(¹nonengsukatma01@gmail.com)

Abstract-This research is useful for natural design in marketing, especially in the coffee shop area. Coffee shops serving well-maintained gardens, trendy fountains and entertainment are increasingly sought after by the public. Data were obtained from a sample of 700 respondents. Using AMOS 18.0, the following results are found, first the greenery design significantly influences the perception of utilitarian value, both greenery design significantly influence the perception of hedonic values, the three utilitarian values significantly influence loyalty and finally the hedonic value also significantly affects loyalty to coffee shop.

Keywords- *Greenery, Utilitarian Values, Hedonic Values and Loyalty*

I. INTRODUCTION

The mushrooming coffee shop on the corners of the metropolitan city becomes an interesting phenomenon for young people today. Hours spent with a variety of activities ranging from drinking coffee, browsing the Internet or working on assignments or work office that has not finished yet. The tendency of consumers increasingly feel uncomfortable in this house, which is considered by some as a "commoditization" of goods and services at coffee shops (Chebat & Dube, 2000; Babin et al. 2005) and the tendency of consumers to increasingly "isolate themselves" in coffee shops and play the internet. Unwitting consumers increasingly of course will also be saturated when the design and neighborhood coffee shop that always highlight aspects of the basic needs (variants and flavors of coffee, internet facilities) and aspects of glamor to the illumination colors, impressing dry area away from the beautiful atmosphere, it can causing physical and mental fatigue. Coffee shop environmental researchers call it, because of the natural and rural elements, as a form new service breakthroughs (Relph, 1976). Undeniably, contemporary marketing researchers argue that coffee shops have experienced customer discovery deficits (Verde & Wharton, 2015), with bored visitors to coffee shops, caused by a lack of novelty and unique experiences. At present, the coffee shop environment is dominated by design of concrete walls, closed, little green space, many chemical elements that have radiation to humans (Relph, 1976).

Many retail experts believe retailers and coffee shop developers can increase consumer interest in buying, by making design changes that integrate natural elements, such as plants, water shows (fountains), and animals (e.g. birds, butterflies, squirrels), into the context of the store which features choices in coffee shops and low cost entertainment (Rosenbaum *et al.*, 2016; Brengman *et al.*, 2012). Previous researchers stated that the presence of natural elements in the context of coffee shops can help inhibit consumer boredom and encourage positive responses, such as spending more time and money, as a result of restorative elements in the physical environment or coffee service scape.

Previous researchers have paid great attention to malls especially in the field of the environment that resulted in affective changes that produced important outcomes from marketing aspects such as sales, value, and satisfaction (Nielsen, 2014; Joye et al., 2010). But there are still few researchers who pay attention to the lower middle-scale coffee shops from environmental aspects with natural designs, to the unique benefits sought by customers. In the context of the service, the environment is important intangibles goods that help differentiate a successful service company of unsuccessful one (Laroche et al., 2001). The unique benefits sought by consumers today are values that can fulfill the elements of functional and emotional benefits that can make an experience truly valuable. Scale of Personal Shopping Value (PSV) is a two-dimensional construct that reflects the overall assessment of the value of a particular resource service in a coffee shop (Babin et al., 1994). Both dimensions include utilitarian values and hedonic values (Babin, et al., 2005). Utilitarian values are instrumental, functional, and cognitive and represent *customer value* as a way to achieve goals (Chandon et al., 2000). For example, coffee taste, fast internet, ease of access can be classified as utilitarian values (Ailawadi et al., 2001; Chaudhuri & Holbrook, 2001). Hedonic value is the result associated with spontaneous and more subjective responses, such as entertainment, exploration, and self-expression and inner pleasures (Ailawadi et al., 2001; Chandon et al., 2000; Babin et al., 1994). Research on the benefits of the value of a service so far has only highlighted matters that are directly related to the economic and non-economic aspects (i.e. Babin 1994; Babin et al., 2005), making the atmosphere smell better (Lwin & Morrin, 2012; Krishna et al., 2014; Errajaa et al. 2018). Still

relative bit of researchers who focus on the combination of coffee shop setting with natural elements as a lifestyle center which is open, on the response of consumers or health which is still relatively not widely studied, although this retail format is increasingly popular in the world (Nielsen, 2014; Yan & Eckman, 2009).

According to the paradigm SOR shows that environmental stimuli (elements of greenery) can cause internal reactions (organisms; for example, emotions over the benefits of utilitarian and hedonic) thus, in turn, can influence reactions (eg, social interaction, visiting intentions, satisfaction) (Mehrabian & Russell, 1974; Babin et al., 1994; Errajaa et al., 2018). This paradigm justifies our framework in hypothesizing greenery that influences on utilitarian and hedonic benefits and loyalty.

Thus, this paper has two objectives. First, this paper examines a new field in coffee shop research namely, the potential of greenery design in the context of coffee shops as a lifestyle that is expected to provide healthy benefits, that is, free from mental exhaustion. Second, the greenery design and transformative service research paradigm (Rosenbaum et al., 2016) to show that a lifestyle center can produce hedonic utilitarian values outside the economic and non-economic aspects.

Specifically, this study aims to analyze the influence of natural elements on customer perceptions of utilitarian and hedonic values, as well as loyalty to coffee shops. We hypothesized that the customer's perception on *the value* that mediates the relationship between the natural elements on coffee shops can increase the value perception on utilitarian or hedonic value and loyalty. If consumers perceive high values from this element of nature, then they are motivated to tell positive stories. In the next few sections, we review previous research about the natural elements in coffee shops, utilitarian and hedonic values, and loyalty and then describe the research methodology, including descriptions of measurements used to test hypotheses. After reviewing the results, we put forward some important implications for managers and research to come.

II. HYPOTHESIS THEORY AND DEVELOPMENT

A. Greenery design at the coffee shop

Greenery design at coffee shops is a relatively new research concept and paradigm in marketing and service scape. Joye et al. (2010) states greenery design which means a combination of natural elements into the coffee shop environment and its benefits. Although "foliage in-store" storefront, mall closed, and lifestyle (Brenngman et al., 2012; Mower et al., 2012; Rosenbaum et al., 2016) is widely used, but empirically, there is very little empirical design of the greenery in commercial coffee shop environment. Greenery is an emotional affiliation inherent in humans with other living organisms" (Wilson, 1993). Natural stimuli tend to cause psychological and physiological responses, including decreased blood pressure, heart rate, muscle tension and levels of stress hormones and mental stress (Browning, 2016). That is, research shows that

exposure to trees and forests increases the human immune system. Research also shows that people who walk in the natural environment (for example, grasslands, forests, parks) state lower depression, tension, confusion, and fatigue than people who choose to walk in a closed indoor shopping mall that impress arid and the nature of their natural is very less (Ichoku, 2015). Design of greenery is perceived by visitor as the value obtained on the benefits aside from the main services from a coffee shop. Previous literature reflects that values have multiple sides. For example, some researchers have concluded that conceptualization of values can vary depending on the context of the study (Dodds et al. 1991; Holbrook & Corfman 1985). Zeithaml (1988) reviewed this literature widely and identified four general uses of the term. The first definition only equates value with price: Value is price. Interestingly, early philosophers (before the 16th century) also viewed values and prices equally (Zeithaml 1988). Two other conceptualizations emphasize the important role of value in the exchange process by representing the *trade-off* between costs and benefits. We only regard value as "what I get from what I give" (Zeithaml, 1988). Other conceptualizations are more specific, expressing value as a *trade-off* between the perception about product quality and price. The operationalization of these values is usually applied to quality - prices study that predicts the selection of products in the end (for example, Babin, et al., 2005). In this form, the value generally acts as an important intermediate variable directly caused by consumer perception of the quality, sacrifice, and intrinsic and extrinsic attributes of a product and causes product selection (Dodds et al., 1991). The fourth definition equates value with a thorough evaluation of subjective prices by considering all relevant evaluation criteria. Here, value is "all factors, both qualitative and quantitative, subjective and objective, which form the overall shopping experience" (Zeithaml, 1988). This definition explicitly recognizes value subjectivity. Here, value is given by the "overall shopping experience," not only by product acquisition. In this study, we discuss values from an experiential perspective this, recognizing that values are closely related to hedonic responses and other intangible consequences (Holbrook & Corfman, 1985). Values in this form are considered important outcome variables in the general model for consumption experiences (Purwanto et al. 2015; Holbrook, 1986). Value is the interactive relativistic preference experience that characterizes the experience of a subject in interacting with some objects. Objects can be objects or events (Holbrook & Corfman, 1985). Greenery design is an event that is felt by visitors that can generate value through achieving goals that are intended successfully (for example, feeling fitter because of the benefits of greenery) or by giving pleasure and / or excitement (for example, the sensation of "nature in the coffee shop"). Thus we can propose a hypothesis that:

H1: Greenery design at coffee shops has a positive relationship to the value perceived by visitors.

B. Utilitarian Value

Utilitarian value is defined as a comprehensive evaluation (i.e. decision) of functional and financial benefits. Utilitarian values are relevant to the presentation of coffee shop service providers, such as considerations to buy (considering aspects of products, services, and prices before actually buying)

(Purwanto et al. 2015; Hoffman & Novak, 1996). Although this concept is the same as the active source of extrinsic value shopping as identified by Mathwick et al. (2001), we believe in the importance of further differentiating utilitarian values as something distinctive and different from hedonic values. Utilitarian values include aspects of more cognitive attitudes, such as economic value for money (Purwanto & Kuswandi 2017; Zeithaml, 1988) and value judgment for ease and time savings (Jarvenpaa & Todd, 1997; Teo, 2001). For example, visiting coffee shops is due to the ease of finding and comparing other coffee shops, evaluating the price / quality ratio, hygienic because it emphasizes the concept of greenery and saves time and psychological resources (Grewal et al., 2003; Rosenbaum, et al., 2018).

In several previous studies, the researchers suggested that one motivation for customers in making relational exchanges was to save money (for example, Gwinner et al., 1998; Peltier & Westfall, 2000). Service providers often provide loyal *reward* customers in the form of special price offers. For example, airlines and large hotel networks give points to frequent customers as an incentive for them to use additional services from companies (Schiffman & Kanuk, 2004). According to some studies, economic services including natural and hygienic coffee shop services increase customer perceptions of utilitarian value and thus increase the usefulness derived from their purchases (for example, Ailawadi et al., 2001; Brengman, et al., 2012; Mower, et al., 2012; Rosenbaum et al., 2016).

Thus the hypothesis proposed is:

H2: Greenery design strategy positively affects customer perception of utilitarian value at the coffee shop.

C. Hedonic value

Hedonic value is defined as a comprehensive evaluation of *experiential* and sacrificial benefits, such as entertainment and escapism. Consumers often shop for appreciation of experience not just completing tasks (Purwanto et al. 2015; Babin et al., 1994). Hedonic values, such as entertainment, exploration, and self-expression (Ailawadi et al., 2001; Chandon et al., 2000), come more from pleasure and enjoyment than from completion of tasks and are non-instrumental, *experiential*, and affective in nature (Chaudhuri & Holbrook, 2001; Hirschman & Holbrook, 1982). Hedonic values on the concept of greenery can be obtained through the sensation of rural or open mountains that integrate natural elements, recreation, and entertainment, all in beautiful garden settings, elements of fountains, animals (e.g. birds, butterflies, squirrels), *sports* (shooting range, *fitness*) and hangout places in the context of coffee shops so that spiritual welfare/*healthy customers* can be realized (Joye et al, 2010; Rosenbaum et al., 2016; Rosenbaum et al., 2018).

H3: Greenery design strategies positively affect customer perceptions of hedonic values in coffee shops.

D. Relationship of value with loyalty

Commitment of that held firmly to repurchase or re-subscribe to a product / service that is consistently preferred in the future is the definition of loyalty (Oliver, 1999). Some previous studies suggested that customer value, or the benefits

obtained, play an important role in determining its long-term relationship with, or loyalty to, the company. For long-term relationships to exist and continue, the customer must take benefit from its exchanging with the company (Gwinner et al., 1998). Thus, customer perception of value can be seen as an important determinant of brand and loyalty to the company.

Research on shopping values also shows a direct relationship between shopping value and the value given to shopping activities, so that the higher the utilitarian and hedonic values of shopping, the greater the assessment by customers of the value of shopping activities (Babin et al., 1994). By using several concepts that are similar to utilitarian values, Cronin and Taylor (1992) suggest that convenience, price, and availability can influence customer behavioral intention. Gwinner et al. (1998) reveal that customers are less likely to switch to other companies if they understand better the economic value, time, and energy savings of maintaining a relationship.

Therefore, we propose that utilitarian values and hedonic values predict customer behavior. That is, if a customer has a high perception of utilitarian or hedonic value, then he will become a loyal customer for the coffee shop.

H4: Customer perception of the utilitarian value of the relationship is positively related to its loyalty to the coffee shop.

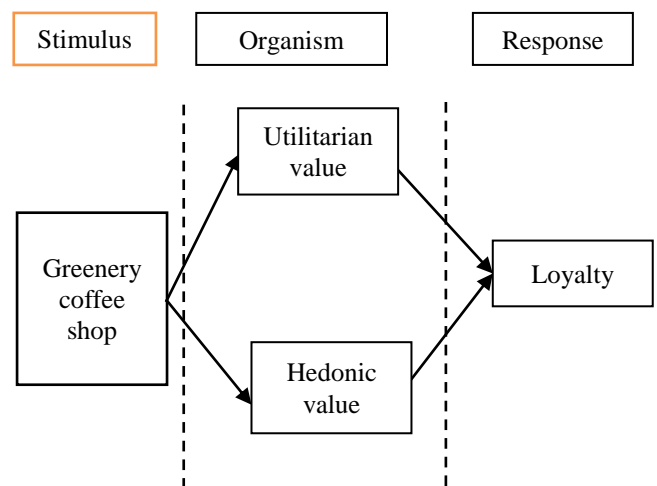


Figure 1. Conceptual framework

III. METHOD

A. Procedures and samples

We conducted a survey of coffee shop customers in Surabaya using *convenience sampling* method. We distributed questionnaires to 50 university students whose job as data collectors had been successfully adopted in several previous studies on service marketing (for example, Gwinner et al., 1998) and ordered them to each distribute five questionnaires to anyone who has visited a coffee shop. In the questionnaire, respondents were asked to choose a coffee shop that served

them during a period of time and circled their perception of the coffee service.

B. Sample characteristics

Questionnaires that will be distributed are 700 questionnaires to coffee shop visitors in Surabaya. Male respondents were 435 (62%) and women were 265 (37%), aged between 20-45 years (mean = 30.1 years, median = 28 years).

C. Measuring instrument

Based on several previous studies, we developed 15 items (Table 1 to measure greenery cafes to respondents (for example, Brengman et al., 2012; Mower et al., 2012; Rosenbaum et al., 2016; Yan & Eckman, 2009); to measure utilitarian and hedonic values, we develop 5 items (Table 2) based on two studies (Chiu et al. 2005; Purwanto & Kuswandi, 2017). For all items, we use the Likert type scale with seven points (1 - strongly disagree; 7 - strongly agree).

TABLE I. DOSAGE OF GREENERY AT THE COFFEE SHOP

1	The design of the coffee shop offers greenery concept full of plants
2	Coffee shop environment with village atmosphere.
3	Coffee shop environment with the concept of a natural environment with various animals of butterflies and birds.

TABLE II. MEASUREMENT OF UTILITARIAN AND HEDONIC VALUES

Utilitarian value	
1	This coffee shop is easily accessible
2	This coffee shop menu fits my taste
3	This coffee shop is affordable for me
4	This coffee shop offers a variety of complete menu choices
5	This coffee shop provides fast internet facilities
Hedonic value	
1	The design of this coffee shop made me feel at home
2	Lighting in this coffee shop is very romantic
3	I feel comfortable with a natural environment full of plants
4	I feel comfortable with a natural environment full of decorative animals

According to Ganesh et al. (2000), if customers praise coffee shops, compared to other coffee shops, their behavior shows that they are building good relationships with the coffee shop. Therefore, we adopt three indicators - "As long as I live here, I will not switch to another coffee shop," "I would highly recommend this coffee shop to my friends and family," and "I am willing to continue visiting this coffee shop" - to measure the construct of customer loyalty using the likert type scale 1-7.

IV. ANALYSIS AND RESULTS

A. Construction Reliability and Validity

The reliability of greenery coffee shop instrument, utilitarian and hedonic value and customer loyalty, is tested by calculating Cronbach's alpha. From the calculation results

show the Alfa Cronbach is 0,88, 0.93, 0.89 and 0.81 for greenery coffee shop, utilitarian and hedonic values; and customer loyalty. These values define moderate to high internal constancy in each question item. Instrument validity at construct was tested by confirmatory construct analysis (CFA) and analysis of covariance matrix using the maximum likelihood procedure on AMOS 18.0. Greenery dosage model has a statistical fit ($\chi^2 = 206, df = 45$; goodness-of-fit index [GFI] = 0.96; adjusted goodness of fit index, [AGFI] = 0.94; comparative fit index [CFI] = 0.98; root mean residual [RMR] = 0.08) and fit statistics for *utilitarian and hedonic values* ($\chi^2 = 26, df = 43$; GFI = 0.94; AGFI = 0.96; CFI = 0.97; RMR = 0.02) this is in harmony with the literature.

Testing of the construct model was using its *convergent validity* and *discriminant validity* (Churchill, 1979). The test results showed Average variance extracted (AVE) for greenery coffee shop, utilitarian and hedonic values; and customer loyalty amounting to 0.65, 0.71, and 0.72 and 0.71. Everything exceeds the recommended level of 0.50. Therefore, the scale for greenery coffee shop and the perception of utilitarian and hedonic values have *convergent validity* (Fornell and Larcker, 1981). AVE values can also be used to evaluate *discriminant validity* (Fornell & Larcker, 1981), which is clearly visible in the results of this study because the biggest *shared variance* in the greenery coffee shop factor is 0.58, lower than the smallest AVE value (0.65) for each factor and measuring instrument on the greenery coffee shop scale (Espinoza, 1999). Similarly, the *shared variance* between utilitarian and hedonic value factors of 0.54, is lower than the lowest AVE (0.65) for each factor and the means of measurement on a scale of customer perception of the value of utilitarian and hedonic.

B. Hypothesis testing

To test the *H1-H2* hypothesis using AMOS 18.0 and estimate its parameter (γ and β). Hypothesis 1 states that *greenery* has a significant effect on utilitarian value in coffee shops. Hypothesis 2 states that *greenery* has a significant effect on hedonic values in coffee shops. The findings show that greenery coffee shop has a positive and significant effect on utilitarian value and hedonic value of 42%. In fact, greenery coffee shop explains 76% variation in value. So, Hypotheses 1 and 2 are supported.

TABLE III. HYPOTHESIS TEST

Hypotheses	Paths	Estimate	Result
H1	Greenery Coffee shop- Utilitarian value	0.021	Significant
H2	Greenery Coffee shop- Hedonic value	0.004	Significant
H3	Utilitarian value – loyalty	0.027	Significant
H4	Hedonic value – loyalty	0.011	Significant

Note: * p < 0.05

Hypothesis 3 states that utilitarian value has a significant effect on customer loyalty in coffee shops. Utilitarian values explain about 41% of the variation in loyalty, and hedonic values only account for 44%. Thus, hypothesis 3 and 4 are supported as shown in Table 1.

C. Discussion

Research about consumption goals of this research question (see Bagozzi & Dholakia, 1999) shows that greenery coffee shop evokes perceptions of customer value and loyalty. This dimension contributed in causing customers to visit green coffee shops. The measurement model confirms the three-dimensional of greenery coffee shop and two common values (utilitarian and hedonic) in the coffee shop environment, operationalized at the level of benefits rather than at the attribute level. This study found that consumers indeed perceive utilitarian values and hedonic values as important values in their choice of coffee shops and customer loyalty (Purwanto, et al. 2015). Coffee shop customers switch to coffee shops that highlight natural nuances with green dosage (Rosenbaum *et al.*, 2016). This finding is important considering that previous research (for example, Babin & Attaway, 2000; Tiffernt & Vilni - Yavetz, 2017) shows utilitarian and hedonic values play an important role in customer loyalty. Given the findings of this study, store owners must ensure that they provide a greenish dose of both utilitarian and adequate hedonic values to coffee shop customers.

D. Managerial implications

Competition in the coffee shop industry is very tight, customer relationship management is becoming more important (Crosby et al., 1990; Purwanto et al., 2015). Loyal customers visit more often, willing to linger, more accessible (Harris & Goode, 2004), and subscribes loss can affect market share and profits of a coffee shop negatively (Colgate & Hedge, 2001). This research gave strategic implications at the coffee shop.

First, coffee shops must design a more natural environment to reduce boredom and the situation of coffee shops that seem to be full of cigarette smoke. Although there are many ways for coffee shops to attract customers through intense prices and promotions, green doses are believed to be the most effective way to attract more customers.

Second, coffee shops must distinguish various characteristics between customers who are more concerned with utilitarian values and customers who are more concerned with hedonic values as in the findings of this study. In addition, utilitarian and hedonic values significantly influence customer loyalty. Thus, the results of this study indicate that subscribes can be segmented effectively according to their behavior. Ultimately, managers must focus on one or more characteristics of their desires and use them as a way to differentiate coffee shops from competitors for each customer group.

E. Weakness

This research has several weaknesses. First is a matter of external validity, this result cannot necessarily be generalized outside the Surabaya area considering the very diverse characteristics of the population in Indonesia. Second, we only include the coffee shop industry and the *margin of error* lies in generalizing the conclusions in this study for types outside coffee shops. Third, the sampling method for this study was *convenience sampling* which was not scientifically designed. So that the bias in the sample is very possible.

REFERENCE

- [1] Chebat, J.C. & Dube, L. (2000). Evolution and challenges facing retail atmospherics: the apprentice sorcerer is dying. *Journal of Business Research*, 49 (2), 89-90.
- [2] Babin, B.J., Lee, Y.K., Kim, E., & Griffin, M. (2005). Modeling consumer satisfaction and word-of-mouth: restaurant patronage in Korea. *Journal of Services Marketing*, 19(3)133 – 139.
- [3] Relph, E., (1976). Place and Placelessness. Pion, London.
- [4] Verde, Wharton, 2015. The 2015 Customer Experience Study Reveal Billions at Risk for Retailers from Negative CX.(<http://www.verdegroupp.com/viewpoints/verdewhartonresearch/>) (Accessed 17 May 2016).
- [5] Rosenbaum, M.S., Otolara, M.L., & Ramirez, G.C., (2016). The restorative potential of shopping malls. *Journal retailing consumer service*, 31, 157–165.
- [6] Brengman, M., Willems, K., & Joye, Y., (2012). The impact of in-store greenery on customers. *Psychology marketing*, 29(11), 807–821.
- [7] Nielsen, 2014. 2014 State of the Shopping Center. (<http://www.nielsen.com/us/en/insights/reports/2014/2014-state-of-the-shopping-center.html>) (Accessed 17 May 2017).
- [8] Joye, Y., Willems, K., Brengman, M., & Wolf, K., (2010). The effects of urban greenery on consumer experience: Reviewing the evidence from a restorative perspective. *Urban Forest Urban Green*, 9(1), 57–64.
- [9] Laroche, M., Bergeron, J. & Goutaland, C. (2001). A three-dimensional scale of intangibility. *Journal of Services Research*, 4(1), 26-38.
- [10] Babin, B.J., Darden, W.R. & Griffin, M. (1994). Work and/or fun: measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20, (3)644-56.
- [11] Chandon, P., Wansink, B. & Gilles, L. (2000). A benefit congruency framework of sales promotion effectiveness. *Journal of Marketing*, 64 (4), 65-82.
- [12] Ailawadi K.L., Neslin, S.A., & Gedenk, K. (2001). Pursuing the value-conscious consumer: store brands versus national brand promotions. *Journal Marketing*, 65(1), 71 – 89.
- [13] Chaudhuri A., & Holbrook M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal Marketing*, 65(2), 81 – 93.
- [14] Lwin, M.O., & Morrin, M., (2012). Scenting movie theatre commercials: the impact of scent and pictures on brand evaluation and ad recall. *Journal Consumer Behavior*, 11(3), 364–372.
- [15] Krishna, A., Morrin, M., & Sayin, E., (2014). Smellizing cookies and salivating: a focus on olfactory imagery. *Journal Consumer Research*, 41(1), 18–34.
- [16] Errajaaa, K., Legohérelb, P., & Daucéc, B. (2018). Immersion and emotional reactions to the ambiance of a multiservice space: The role of perceived congruence between odor and brand image. *Journal of Retailing and Consumer Services*, 40, 100–108.
- [17] Yan, N., & Eckman, M., (2009). Are lifestyle centres unique? Consumers' perceptions across locations. *International Journal Retail Distribution Management*, 37(1), 24–42.
- [18] Mehrabian, A. & Russell, J. (1974). An Approach to Environmental Psychology. MIT Press. Cambridge, MA.
- [19] Mower, J.M., Kim, M., & Childs, M.L., (2012). Exterior atmospherics and consumer behavior: Influence of landscaping and window display. *Journal Fashion Marketing Management*, 16 (4), 442–453.
- [20] Wilson, E.O., (1993). Biophilia and the conservation ethic. In: Kellert, S.R., Wilson, E.O. (Eds.), *The Biophilia Hypothesis*. Island Press, Washington, DC, 31–41.
- [21] Browning, B., (2016). Biophilia, buildings, and your brain. *People Strategy*, 39 (2), 8–11.
- [22] Ichoku, C., (2015). Linking Nature and Health: Implication for the Physical Therapy Field. (https://vtechworks.lib.vt.edu/bitstream/handle/10919/64916/ichoku_final_Nature_and_Health.pdf;seq) (Accessed 17 April 2017).

- [23] Dodds, W.B., Monroe K. B., & Grewal, D. (1991). Effect of price, brand, and store information of buyers' product evaluations. *Journal Marketing Research*, 28(8), 307 – 19.
- [24] Holbrook, M.B., & Corfman K.P. (1985). Quality and value in the consumption experience: Phaedrus rides again. In: Jacoby J, Olson J, editors. *Perceived quality. Lexington (MA) 7 Lexington Books*, 31 – 57.
- [25] Zeithaml, V.A., (1988). Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence. *Journal Marketing*, 52:2-22
- [26] Holbrook MB. The nature of customer value: an axiology of service in the consumption experience. In: Oliver Richard Rust Roland T, editor. *Service quality: new directions in theory and practice*. London: Sage Publications; 1994. p. 21–71.
- [27] Hoffman, D.L., & Novak, T.P. (1996). Marketing in hypermedia computer mediated environments: conceptual foundations. *Journal Marketing*, 60, 50–68.
- [28] Mathwick C, Malhotra N, & Rigdon, E (2001). Experiential value: conceptualization, measurement, and application in the catalog and Internet shopping environment. *Journal Retailing*, 77, 39–56.
- [29] Jarvenpaa, S. L., & Todd, P.A., (1997). Consumer reactions to electronic shopping on the World Wide Web. *International Journal Electronic Commercial*, 1(2), 59–88.
- [30] Teo, T. (2001). Demographic and motivation variables associated with Internet usage activities. *Internet Research*, 11(2)125–37.
- [31] Churchill, Jr G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal Marketing Research*, 16(1), 64 – 73.
- [32] Grewal D, Gopalkrishnan R.I, Krishnan R, & Sharma A., (2003). The Internet and the price value loyalty chain. *Journal Business Research*, 56(5), 391–8.
- [33] Rosenbaum, M.S., Ramirez, G.C., & Camino, J.R. (2018). A dose of nature and shopping: The restorative potential of biophilic lifestyle center designs. *Journal of Retailing and Consumer Services*, 40, 66–73.
- [34] Gwinner K.P, Gremler D.D, & Bitner M.J. (1998). Relational benefits in service industries: the customer's perspective. *Journal Academic Marketing Science*, 26(2), 101 – 14.
- [35] Peltier J.W, & Westfall, J. (2000). Dissecting the HMO-benefits managers relationship: what to measure and why. *Marketing Health Service*, 20(2), 4 – 13.
- [36] Babin B.J, & Attaway J.S. (2000). Atmospheric affect as a tool for creating value and gaining share of customer. *Journal Business Research*, 49, 91–9.
- [37] Hirschman EC, & Holbrook M.B. (1982). Hedonic consumption: emerging concepts, methods and propositions. *Journal Marketing*, 46, 92 – 101.
- [38] Espinoza, M.M. (1999). Assessing the cross-cultural applicability of a service quality measure: a comparative study between Quebec and Peru. *International Journal Service Industry Management*, 10(5):449 – 68.
- [39] Oliver RL. (1999). Whence consumer loyalty? *Journal Marketing*, 63, 33 – 44.
- [40] Cronin, Jr. JJ, & Taylor S.A. (1992). Measuring service quality: a reexamination and extension. *Journal Marketing*, 56(3), 55 – 68.
- [41] Chiu, H.C. & Yi-Ching H. (2005). Relationship Marketing and Consumer Switching Behavior. *Journal Consumer Research*, 58: 1681-1689.
- [42] Purwanto & Kuswandi, (2017). effects of flexibility and interactivity on the perceived value of and satisfaction with e-commerce (evidence from Indonesia). *Market-Tržište*, 29 (2), 139-159
- [43] Fornell C, & Larcker D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal Marketing Research*, 18(2), 39 – 50.
- [44] Ganesh J.M, Arnold J, & Reynolds K.E. (2000). Understanding the customer base of service providers: an examination of the differences between switchers and stayers. *Journal Marketing*, 64(3), 65 – 87.
- [45] Bagozzi R.P, & Dholakia, U. (1999). Goal setting and goal striving in consumer behavior. *Journal Marketing*, 63:19–32 [Special Issue].
- [46] Purwanto, Kuswandi & Sunjoto (2015). Role of Demanding Customer: The Influence of Utilitarian and Hedonic Values on Loyalty Customer. *Journal of Arts, Science & Commerce*, 6 (1), 1-11
- [47] Tifferet, S., & Vilnai-Yavetz, I., (2017). Phytophilia and service atmospherics: the effect of indoor plants on consumers. *Environmental Behavior*. 49(7), 814–844.
- [48] Crosby LA, Evans KR, & Cowles D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *Journal Marketing*, 54(3), 68 – 81.
- [49] Schiffman, L.G, & Kanuk, L.L. (2004). *Consumer behavior*. 8th ed. Upper Saddle River (NJ) 7 Pearson Prentice Hall.
- [50] Harris LC, & Goode, M.M.H. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal Retailing* 80(2), 139 – 58.
- [51] Colgate M, & Hedge R. (2001). An investigation into the switching process in retail banking services. *International Journal Bank Marketing* 19(5), 201 – 12.